ENTOMOLOGICAL NEWS

AND

PROCEEDINGS OF THE ENTOMOLOGICAL SECTION,

ACADEMY OF NATURAL SCIENCES, PHILADELPHIA.

VOL. II. OCTOBER, 1891. No. 8.

CONTENTS:

Explanation of Plate VII..... 149
Neumoegen—Aberrations and varieties of well-known insects..... 150
Beutenmuller—Early stages of some moths..... 152
Mason—Rocks..... 153
Hudson—A new Gluphisia..... 155
Holland—A new Grophæla from Colo.. 156
Skinner—Elementary Entomology. 157
Skinner—Random notes on Lepidoptera 158
Townsend—An Exorista parasitic on Lagoa operoularis..... 159
Notes and News..... 160
Entomological Literature..... 164
Doings of Societies..... 168

Plate VII represents the so-called "Owl Butterfly." This individual specimen is *Caligo atreus*, and flies in America in the Equatorial region. The underside photographed, looks very much like an owl, the ocelli representing the eyes, and the various shadings of brown representing the feathers. Insect collectors frequently represent the body of the owl by other lepidopterous insects, or in some cases brilliant Coleoptera, and use a species of *Caligo* for the head, thus making a pleasing picture. There are about twenty-five species in the genus, and they are all fine, large insects, some of them very beautiful, but not so brilliantly colored as the allied genus *Morpho*. They fly in Mexico and Central America, and in Tropical South America. They are represented in the East Indies by an allied genus, *Thaumantis*, which also contains large and beautiful butterflies of a dozen species. The specimen represented is, unfortunately, somewhat broken, but shows the character of the underside of the fly very well. This also shows the utility of the orthochromatic process, as this species has colors on the underside which would not be shown in an ordinary plate.

This plate, like others we have given in the NEWS, was made by the Crosscup & West Engraving Company of Philadelphia,

and the butterfly was photographed in the Hall of the Academy by Mr. J. F. Sachse, the talented editor of the "American Journal of Photography," to whom we are indebted for it.—ED.

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Some wonderful aberrations and varieties of well-known insects.

By B. NEUMOEGEN, New York.

There is a German fairy tale about "Hans im Glück," of which I am forcibly reminded. I have been of late such a "lucky Hans," acquiring a number of remarkable varietal and aberratic insects which deserve names, and the knowledge of which I herewith beg to impart to my entomological friends. I never sat down with more pleasure to describe new insects than I did in naming the following forms:

Eacles imperialis ab. **punctatissima.**—Head, thorax and abdomen bright yellow, with purple patagiæ, purple thoracical maculations and overcast with purple on upper part of abdomen. Primaries above: the yellow only shows somewhat at apex, apical part of costa, at intersection of nervures and exterior margin, and at fringes. The entire wings covered with innumerable blackish brown dots, which, near base and along interior margin, are confluent, giving the wings a uniform appearance of blackish brown. A basal purple tinge at interior margin. The purple maculations along exterior margin bounded by the transverse arched line from apex to centre of interior margin, as well as the discal spot, surrounded by a purple ring penetrating the granulated shade. Secondaries: upper part from base along costa to apex bright yellow; the space enclosed by the purple mesial line, and even beyond it, enclosing discal area up to base, covered with countless dots, giving the lower half of wings nearly a uniform appearance of blackish brown. Discal spot prominent, with purple ring and a purple basal tinge; fringe yellow.

Below: basal half of primaries and secondaries, as well as abdomen, bright yellow; the remaining space of both wings, as well as the discal spots, blackish brown produced by the many dots, partly confluent, of this color. Basal half of costa of primaries, and costa of secondaries, blackish brown; fringes yellow.

Type ♂ coll. B. Neumoegen.

This extraordinary insect was taken by Mr. H. Saenger at Highbridge, in the upper part of New York City.

Eacles imperialis var. **nobilis.**—Males above: thorax and abdomen dark purple. Antennæ, head, as well as a central thoracical line and a cross-band at first segment of abdomen, of brownish yellow. Primaries and

secondaries of a deep russet color; fringes and all maculations of dark purple, strewn with black dots, much like in var. *didyma* DeB., thus showing an irregular, triangular space of deep russet resting with its base on apical half of costa pointing towards median nervure and bounded by the discal spot and transverse apical arched line respectively. Secondaries of a rich russet, with discal spot; mesial undulating band and basal tinge of dark purple; some black dots along marginal area.

Below: wings and abdomen of a lighter russet shade. Discal spots, space between apical, arched transverse line and external margin of primaries of dark purple, fading towards interior margin. The marginal space of secondaries between mesial band and exterior margin of brownish purple.

Females.—The same rich russet as in the males prevails, but only the discal spots, the transverse apical, arched band of primaries, the mesial band of secondaries and the basal tinges are of dark purple. The marginal spheres in both wings resembling var. *didyma*, are of a bright chestnut-brown. Below: both wings russet, with light brown marginal sphere, somewhat fading into yellow in basal half of interior margin of primaries.

This is a remarkable variety from southwestern Texas; constant in all its characters, as shown by a number of examples I have lately received.

Types, ♂ and ♀, coll. B. Neumoegen.

Citheronia regalis ab. **Saengeri.**—Head, thorax and abdomen bright sulphur. Primaries grayish purple, with yellow nervures. Basal and discal dots very large and like the transverse intercellular, oval maculations of bright sulphur; apical part of costa and interior margin bright sulphur, fringes equally so at intersection of nervures. Secondaries uniformly bright sulphur, with a slight orange, basal tinge and faint indications of grayish purple transverse maculations in cells near anal angle.

Below: primaries of bright sulphur, with a slight orange tinge along nervures. Discal spot and marginal space from apex to outer angle, as well as the two upper cells near centre of costa, of grayish purple. Secondaries bright sulphur, with discal spot and mesial band of orange color; apical part of three upper cells of grayish purple.

Type ♂, coll. B. Neumoegen.

A wonderful aberration, fresh and bright in appearance, and entirely distinct from the typical form. It was taken in the upper part of New York City by Mr. Herman Saenger, to whose industrious exploits I cannot do more honor than by dedicating this beautiful insect to him. It is an enormously developed ♂, expanding 115 mm., the body having a length of 35 mm.

Platysamia Gloveri var. **reducta.**

This is a very curious dwarf form, flying in the highest part of the Colorado range of the Rocky Mountains. The discal spot in primaries invariably touches the transverse posterior white band. The reddish brown space containing the discal spot and bordered by the white basal and transverse posterior bands is so narrow that in most of the examples it shrinks to a mere black line at the centre of interior margin. The basal reddish brown area containing the discal spot of secondaries is so narrow, that it never exceeds 25 mm. in its measure. In other respects the insect tallies with the typical form.

It is easily distinguished by its minimal size of body and wings, and by the transverse band connecting with discal spot of primaries. Expanse of wings ♂, 83 mm.; 85 mm. Length of body, ♂, 25 mm.; ♀, 25 mm.

Types coll. B. Neumoegen.

Described from a number of examples taken at an altitude of 11,000 feet by Mr. D. Bruce in July, 1890, at Gibson Gulch, Colorado.

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ON THE EARLY STAGES OF SOME MOTHS.

By Wm. Beutenmuller, New York.

Cherocampa tersa Linn.

Larva.—Body pale green, with very fine longitudinal irrorations. Head small, smooth, green; mouth parts black; along the subdorsum is a rather broad, white band running from the fourth segment to the caudal horn on the eleventh segment; on the band is placed, on each segment, a round black ring, the one on the fourth segment with a black eye-like spot in the centre. Color of the underside of the body and all the legs concolorous to the above; caudal horn reddish, with the apex black. Length about 60 mm.

The larva figured by Abbot and Smith (Ins. Ga. p. 75, pl. 38) has in each of the black rings along the subdorsum a large red spot. In all my specimens, six in number, no sign of the red spots was apparent.

Food-Plant.—*Manettia bicolor.* September.

Pyromorpha dimidiata H.-S.

Egg.—Ovate, pale yellow, smooth, shining, slightly flattened

above and below. Length about 1 mm.; width about .75 inch. Laid June 18th; emerged June 28th.

YOUNG LARVA.—Dirty grayish white and covered with rather long hairs of the same color; head also grayish white with a brown spot on each side of the anterior part; mouth parts pitchy black. The head is sometimes entirely black or brown, shining; underside of body same color as above. Length 50 mm.

Not knowing the food-plant I was unable to rear the larvæ to maturity. The eggs I obtained from a number of females flying amongst a species of grass on the border of a well-shaded and dry piece of woods on Long Island, N. Y.; about fifty imagos were taken. The young larvæ, however, refused to eat the grass on which I found the moths, and which I supposed was also the food of the species.

Apatela innotata Guen.

LARVA.—Head, posterior portion pitchy-brown, anterior part dirty-white, with the mandibles pitchy. Body above dull grayish brown, with a series of four shining, black, piliferous spots on each segment along the dorsal region from the second to the last segment and two rows of yellow spots along each side with another row of black spots between; underside dull grayish. Legs and feet concolorous. The body is also sparsely covered with sordid white hairs. Length 25 mm. Food-plant unknown.

Found ready to pupate on the trunk of a hickory tree, the bark of which the larva mimics. Collected at Englewood, N. J., Aug. 21, 1890. Imago emerged May 6, 1891. The larva spun a rude cocoon made of small bits of wood.

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ROCKS.

By J. T. MASON, Houston, Tex.

On looking over the present volume of NEWS I noticed the article in the February number entitled, "Lepidoptera at the Electric Lights," by Dr. Ottolengui. Reading it caused all the difficulties in the way of many of us becoming advanced entomologists to rise before me. I handed the book to a young friend of mine and told him to read the article; he has collected about a year, and was greatly interested in the subject. After he had

read it through he remarked, "how does this fellow get all these names down so fine?" This is a question which is readily answered; he lives in New York and in his association with other more advanced students, and in having access to large collections he can readily manage it. This is a rock on which ninety-five per cent. of young beginners are wrecked. We will take this city as an example: I have known not less than six in the past two years that have commenced and have gone to pieces on this rock and fallen by the wayside, and it is most natural. A beginner sees a collection, and is attracted by its beauty, and concludes that he would like to become a collector also, and gets his net and bottle and makes a start. He soon finds that he has a large lot of material on hand and can't tell one from another, rare from common, or good from bad, and winds up in confusion and disgust. Now, if we had in this country some such works as are to be found in Europe, which give figures of most of the species, and published at a reasonable price, many of the difficulties would disappear, but at present the literature is so scattered, and the illustrated works in this country are so very expensive as to place them out of reach of most of us. Those plates of *C. regalis* have suggested to my mind that if we had photos like these of the species in this country, or of a considerable portion of them along with descriptions of the colors, and if such a work could be gotten out, say at a cost of not over ten dollars, we would find a hundred collectors where we find one to-day. Last season a friend caught a *luna* moth and brought it thirty-five miles because he thought it a rarity; it would have crushed him if I had mentioned the fact that I had sent over six hundred to London during the same month. About twice a year we get an accumulation of unknown material and send them North for identification; this works pretty well where we have more than one of a kind, but it often happens that we have but one and don't want to box it and run the risk of having it lost or broken. All collectors know how we cherish a single specimen believed to be rare, and in future I never intend to let these single specimens go out of my keeping. I am, therefore, looking forward to the good time coming when we can all have better means of identification, and Entomology becomes more popular and generally studied. I have enumerated some of the rocks, but there are more, and I hope they may be gradually eliminated.

A NEW GLUPHISIA.

By Prof. GEO. H. HUDSON, Plattsburg, N. Y.

Gluphisia avimacula n. sp.

Male.—Thorax cinereous; vertex of head, collar and anterior half of patagia nearly black; front, palpi and pectus pale brown; legs cinereous, the tarsi ringed with dark brown; abdomen gray. Primaries cinereous, thickly dusted with black scales; a black basal line, dentate on subcostal and median veins and sending down, intermediately, two fine black lines, which reach and enclose the small, pale ochreous basal spot, resting on median vein; obscure on costa and below submedian vein. Second band nearly straight, deep black, prominent, starting on costa at a little less than half way to the apex, slightly angulated outwardly on subcostal and median veins, forming a shallow inward curve or sinus below submedian fold, widening at internal margin. An ochreous subtriangular discal spot edged with black, projecting a point towards the costa and a shorter one towards the base along median vein. Externally contiguous to the discal spot is an indistinct third band, subparallel to the first, slightly waved, pale brown and diffuse, more distinct on internal margin. Beyond this is a narrow and faint fourth beginning on costa at about three-fourths distance from base, parallel to external margin, dentate inwardly on the veins, slightly angulated at vein 2, edged externally with pale cinereous. A fifth band consisting of a row of dark spots, edged within with pale cinereous, runs about midway between band four and the external margin. It has a slightly waved appearance with a shallow inward curve on vein 2, from thence it runs to the outer angle and joins the row of black, diffuse, intervenular spots in the pale cinereous fringe. The ground color of wings is palest between the first two lines, and slightly yellowish beyond and below the discal spot. Secondaries brownish cinereous, with a faint mesial band, dentate inwardly between veins 1 and 2, more distinct at internal margin, where it is white, shaded before by a black line and behind by a more diffuse black spot, followed by another pale spot before reaching margin; fringes as in primaries, but with intervenular spots more diffuse, almost forming a continuous line. Beneath concolorous with secondaries above, tinged with cinereous at the apex of the primaries and outer third of secondaries. On each of the wings, beyond the middle, a slightly undulating darker band edged with pale whitish outwardly and following the course of the band above.

Female with front cinereous, concolorous with thorax. Expanse: male, 38 mm.; female, 40 mm.

Described from two males and one female taken May 15th and 22d, 1887, and May 10, 1891, at the electric lights, Plattsburg, N. Y.

THE enterprising bee keeps up with the times by having his apartments arranged in sweets.—*Yonkers Gazette.*

A NEW GNOPHÆLA FROM COLORADO.

By W. J. Holland, Ph.D., Pittsburg, Pa.

G. Clappiana n. sp.—Male. Upperside: anterior wings black, with a quadrate spot of pale yellow at end of cell and a band of three small, sharply defined, oval spots below the apex. A minute white spot at base; fringes at apex and near exterior angle narrowly white. Posterior wings deep bluish black, with the fringe somewhat broadly white. Abdomen blue-black; front white; collar marked by two small blue spots; patagiæ pointed with white at base and tips and bordered internally with pale blue. Underside: anterior wings as above. Posterior wings with faint white spot at end of cell, otherwise as above; chest rufous. A line of small white spots is found on each side of abdomen.

Type coll. Holland. Described from a single specimen taken upon the mountains of Williams River, Colorado, by Mr. Geo. H. Clapp, president of the Iron City Microscopical Society, July, 1891.

This description was written in the rooms of the American Entomological Society after a careful search through the literature and examination of the species in the genus.

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A NOTE ON THE LIMACODID GENUS ISA Pack.

By Harrison G. Dyar.

Recently on a visit to Boston I saw, by the kindness of Mr. Henshaw, the type specimen of the genus *Isa*, created for Herrich-Schäffer's species *textula*. The specimen is a small female *Sisyrosea inornata* G. & R., and I have compared Dr. Packard's characterization of genus *Isa* with specimens of *inornata* and find all the characters borne out. Especially his description of the venation is characteristic of the somewhat peculiar venation of *S. inornata*. I am not sure that this is the correct identification of the species *textula*, but as I know of no other species to which the name should apply, I would arrange the genus as follows:

Genus Isa Packard.

sisyrosea Grote.
inornata G. & R.
? textula H.-S.
nasoni Grt.
rude Hy. Edw.

ELEMENTARY ENTOMOLOGY.

The third stage of existence in lepidopterous insects is called the chrysalis or pupa stage. The term chrysalis is derived from a word meaning golden, because many of them are decorated with golden spots. Pupa comes from a word meaning boy or child, because a pupa was thought to resemble an Egyptian child swathed in bandages, or a mummy. In the Rhopalocera or diurnals, the chrysalis or pupa, is naked, and not covered with a cocoon, nor do the larvæ enter the ground to undergo their changes. The majority also differ in being variously ornamented and shaped, although the general pattern is that of an inverted cone. The chrysalids of the Hesperids or skipper butterflies which approach the moths or Heterocera in character are protected by a few leaves or blades of grass which the caterpillar draws around itself before changing. The character of the outer hard covering in these is different from the diurnals in general, being hard, dark and shining, like those of the moths, although quite a number are covered with a light bloom like that on a plum. It is thus quite easy to distinguish the chrysalis of a butterfly from that of a moth. The chrysalids of the diurnals are suspended to a stick or leaf by the extremity, or in addition to this in some cases are fastened by a sling of silk which goes around the body of the chrysalis, and is fastened on each side of the supporting leaf or twig. In the former case the head of the caterpillar hangs downward, and in the latter it points upwards and outwards at an angle. Some of the larvæ of the moths find a convenient place under a piece of bark and change to a chrysalis; some spin a shroud or cocoon, which in some cases is composed of silk, and in others of the caterpillar's own hairs interwoven. Some employ bits of wood, leaves, sticks and pieces of earth in the same way. Many enter the ground and transform as already mentioned. The changes that go on in a chrysalis are wonderful. The chrysalis is apparently dead, showing no signs of life, but in the inanimate looking object is being developed a beautiful insect, perhaps a gorgeous Morpho* or a beautiful Ornithoptera,* yet to all appearance it is an insignificant looking object, giving no indication whatever of Nature's legerdemain or fairy-like performances.—ED.

* Grand butterflies from Brazil and the East Indies, respectively.

RANDOM NOTES ON LEPIDOPTERA.

By HENRY SKINNER, M.D.; Philadelphia.

This Summer *Pamphila hobomok* ♂, and the two females (black one *Pocahontas*), were quite abundant May 31st, and eggs were secured. *P. zabulon* ♂ was also rather common at the same time. I have never seen a female of *zabulon* yellow like the male, and am sure it does not exist in this locality if at all. I have found the male and the black female in copulation a number of times. I can distinguish the females of *zabulon* and *hobomok* without any difficulty, and feel sure that the two species are entirely distinct, and at some future time will have more to say about them. June 10th I saw a female *P. manataaqua* ovipositing, she went down in the grass near the roots and close to the ground, and walked about in the miniature woods depositing an egg here and there near the base of the blades and on the dead and decaying grass. These eggs hatched June 17th. This species was exceedingly abundant on a grassy embankment, and the specimens darted from flower to flower by a succession of quick jerks. I mention the occurrence of the species here in such numbers as it is usually considered quite rare. After one becomes acquainted with it, it can be readily distinguished from *cernes* even on the wing. *P. fusca* was common in Fairmount Park June 9th, and nice, fresh specimens of *Eudamus lycidas* were taken. *Pamphila Aaroni* was moderately plentiful at Cape May, N. J., June 14th. Mr. Philip Laurent has also taken the species at Anglesea, N. J. It is a very wary fellow, and has a very quick flight, but if you get him in his favorite place, the trumpet-like flower of the wild morning-glory, he is at your mercy. He flies straight for the flower, and alights on the lower edge, and walks slowly in until he reaches the sweets, and keeps very quiet, and you would not know there was a specimen around until you learn his artful tricks. A cyanide-jar at the opening of the flower means business and a fine, faultless specimen.

P. delaware is a great rarity here; I saw one fine specimen on a ball-bush flower July 11th, and he was so pretty and fresh, with his brilliant yellow-orange under wings, that I tried to induce him to go into a small cyanide bottle, but he did not agree with me on the subject. Next time I see that fellow I will use a net. I think the types were caught here by Mr. James Ridings. *P.*

massasoit is exceedingly abundant in the swamps near Westville, N. J., from the 4th to the 10th of July, and you can get them as fast as you can use net and bottle. I think it quite a pretty species when fresh; it has such pretty velvety-brown wings. Mr. H. G. Willard, of Grinnell, Iowa, informs me that *Amblyscirtes samoset* flies there in the woods about June 9th, but is anything but common. Mrs. Slosson has also taken a few specimens of this rare species at Franconia, N. H. I will now skip from the skippers and give a couple of new localities which are interesting. Mr. H. G. Willard has sent me *Chrys. helloides* from Iowa. Mr. Edwards' catalogue gives Montana to Arizona; Oregon, California. M. C. H. T. Townsend has sent me *Synchlœ crocale* from Las Cruces, N. Mex.; types, I think, came from western Ariz. The New Mexico specimens lack the internal row of white spots on the secondaries.

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An Exorista parasitic on Lagoa opercularis.

By C. H. Tyler Townsend, Las Cruces, N. Mex.

Dr. Alfredo Duges, of Guanajuato, Mexico, has kindly given me an *Exorista* labeled "from the cocoon of *Lagoa opercularis*." It agrees with none of the twenty-six new species described by Mr. van der Wulp in the "Biologia Centrali-Americana," and a description of it is presented below. It belongs near *E. flavicans* v. d. W. among the species with ciliate hind tibiæ.

Exorista lagoæ nov. sp. ♂.—Black, cinereous with a more or less brassy reflection. Eyes dark brown, thickly pubescent; front, sides of face, cheeks and posterior orbital margins pale brassy; front at vertex narrower than the eyes, much wider at base of antennæ, rather prominent; frontal vitta black, less than one-third the frontal width, wider anteriorly, pronged posteriorly; frontal bristles descending to base of third antennal joint, those before base of antennæ decussate, the sides of front with fine bristly hairs outside the frontal row and on the ocellar area; no orbital bristles; face receding, facial depression wide, silvery; facial ridges bare, only three or four very small bristles above the vibrissæ, which latter are decussate and inserted only slightly above the oral margin; sides of face narrow above, very narrow below base; cheeks narrow, invaded below by the cinereous hairy occipital area, with bristles on lower border; antennæ nearly as long as face, black; second joint short, third joint more than four times as long as the second; arista long, slender, scarcely thickened on basal third, indistinctly jointed at extreme base, black; proboscis short, fleshy, brownish, especially the large labella, which are furnished with

yellowish brown hair; palpi well developed, club-shaped, pale brownish yellowish, black, hairy; occiput cinereous, gray hairy, with a black band from vertex to centre, and the orbital margins with a fringe of black bristles. *Thorax* black, brassy-cinereous pollinose, leaving four more or less well defined black vittæ; thorax bristly and hairy, humeri and pleuræ cinereous; scutellum blackish at base, apical portion broadly ochreous, with an apical strongly decussate pair of macrochætæ and three lateral pairs, the intermediate one short. *Abdomen* moderately broad, ovate, covered with short bristles; first segment somewhat shortened, black, without macrochætæ; second to fourth segments pale brassy cinereous, leaving the hind margins and a median vitta shining black; second segment very faintly reddish on sides, venter silvery pollinose; a median marginal pair of macrochætæ on second segment and a lateral marginal one; about ten marginal on third segment; anal segment with macrochætæ interspersed with bristles. *Legs* black, femora and tibiæ faintly silvery; femora hairy, tibiæ with some strong bristles; hind tibiæ with a fringe of bristles on outer edge, a strong bristle beyond the middle and one or two at tip longer than the rest; claws and pulvilli elongate, the pulvilli smoky whitish. *Wings* longer than the abdomen, moderately wide, without costal spine, grayish hyaline; tegulæ yellowish gray, halteres dark brownish. Length 7 mm.; of wing, 6 mm.

Described from one specimen. Guanajuato, Mexico.

Notes and News.

ENTOMOLOGICAL GLEANINGS FROM ALL QUARTERS OF THE GLOBE.

[The Conductors of ENTOMOLOGICAL NEWS solicit, and will thankfully receive items of news, likely to interest its readers, from any source. The author's name will be given in each case for the information of cataloguers and bibliographers.]

In the future all papers received for publication in the News will be printed according to date of reception.

THE List of Lepidoptera of Boreal America, by Prof. J. B. Smith, has reached 5042 numbered species to date; will be completed by Oct. 1, 1891.

Mr. LEVI W. MENGEL, of Reading, Pa., who went as entomologist to the West Greenland Expedition sent out by the Academy, has returned, and brought home a collection of about four hundred insects.

WE have heard that Prof. J. B. Smith sailed for Europe September 16th. We wish him a pleasant voyage, and have no doubt but what he will come back laden with entomological facts picked up in the museums of Europe.

Prof. R. R. ROWLEY, who has contributed a number of very interesting articles to the NEWS, has been appointed professor of Natural History in

the High School at Fort Smith, Arkansas. We hope he may continue to do good entomological work in this new and interesting locality.

IT is a solitary fly that annoys. Where there are swarms of flies they have their time and attention partly occupied in mutual conversation, playing tag and other fly diversions; but get into a room with a solitary fly and he will give you his undivided attention.—*Boston Transcript.*

THE death of Capt. K. Yankowsky on the upper Yang-tse-Kiang, is a blow to Entomology, and an especially severe one to me. He was known as an excellent captain, an indefatigable traveler, and an ardent collector. He had just returned from a collecting trip to the sacred Mount Omi in Szechuen, when death overtook him on board the boat, built by his own hands, in the midst of his awe-stricken Chinese crew.—B. NEUMOEGEN.

As the commercial Paris green is frequently adulterated with lime I append a reliable test, which may be of use to the many workers in the field of economic entomology. If you take about as much Paris green as will lay on a dime and put it in about tablespoonful of aqua ammonia it will, if pure, all dissolve and turn to a beautiful blue color. If it is adulterated there will be a white sediment in the bottom, which shows the presence of lime.—F. W. GODING.

EXPEDITIONS to Western China and Tibet are, even at this day, connected with great risk of life and enormous expenses. Fanaticism, lying, stealing, are some of the many vicissitudes inflicted by the border people of both realms on European collectors. Although the Pratt Expedition, sent out by Mr. Leech, has been highly successful, no other collector will be sent there again for this reason. Mr. Kricheldorf, the head collector of the last expedition, writes me harrowing tales of his experiences.

B. NEUMOEGEN.

SOME of our old entomologists put us of the younger generation really to shame. Here is an example—Dr. John Gundlach, of Cuba, just writes me: "My health is unimpaired. On July 17, 1891, I celebrated my 81st birthday. My friend, Dr. Gutierrez, president of the Academy, died last December at the age of 90 years. Poey, my best and oldest colleague in Natural History, died in January, nearly 92 years old. I shall try to do the same. Next Spring I shall be on a collecting expedition in Porto Rico and St. Domingo." What youthful ardor and elasticity!

B. NEUMOEGEN.

BITTEN BY A TARANTULA.—While Samuel G. Williams, manager of the Union News Company, was unpacking a box of pears Thursday, which he received from Southern Texas, a tarantula leaped from the box and fastened its fangs in the middle finger of his right hand. He threw it from him and the spider was killed. In half an hour from the time he was bitten, Williams began to get delirious, and his pain was so great that it took three men to hold him. Three doctors are in attendance, but no

hope is entertained of saving the man's life.—A subscriber wishes to know if any reader of the NEWS has knowledge of an authentic case of death from the bite of a tarantula?

A NUMBER of the joints of the ordinary cactus of the plains (*Opuntia missouriensis*), containing pupæ, were recently sent from Colorado to the Kansas University and placed in the breeding cases. Although the pupæ have not yet transformed, a number of puparia have, within the past few days, disclosing two allied Syrphids, *Copestylum marginatum Volucella fasciata*. The puparia were lodged deeply in cavities within the stem,—evidently the feeding place of the larva. The puparia of the two species are scarcely distinguishable, both having a short, conjoined stigmatic tube and two slender anterior projections. The former species has the singular habit of continually keeping an alternate up and down movement of its remarkable antennæ while walking.—S. W. WILLISTON.

This June while on a tramp in quest of Coleoptera I was going through a patch of woods and I noticed on my path one of the larger predatory Diptera which so closely mimic a bumble-bee, and kindly determined for me by my friend, Mr. Wm. T. Davis, as *Dasyllis thoracica* Fabr. He was carrying away a Longicorn beetle. On attempting to pick him up he flew away carrying the beetle with him, which, nevertheless, he dropped upon being struck with my hand and settled in the grass a few feet distant, where he was easily captured. The proboscis of the fly had separated the elytra and penetrated the abdomen between the second and third segments. I have often noticed this fly preying upon soft insects, as Lepidoptera, etc., but never before upon a hard bodied beetle.

J. C. THOMPSON, Clifton, L. I., N. Y.

W. G. WRIGHT, a naturalist of San Bernardino, Southern California, is spending a few weeks in this section (Sitka, Alaska) for the purpose of collecting plants and insects. He finds much of a novel character to interest him, and considers that Alaska presents a wide field for investigation. On Thursday, in company with Fred. E. Frobese, he ascended Mount Verstovia by way of the Jamestown Bay trail, and remained on the summit for some six hours, during which time he secured a large number of species of plants and grasses growing above the timber-line. Mr. Wright has secured several species of flora which he believes to be as yet unknown to botanists. The Alaskan grasses in Mr. Wright's collection will be presented to the Department of Agriculture at Washington, and the flowering plants will be given to the Academy of Sciences at San Francisco and the State University of California, located at Berkeley. Very few insects have as yet been found by Mr. Wright during his search, and those discovered are of no particular value or interest.

LOCUSTS IN MOROCCO.—Some curious information in regard to locusts in Morocco is contained in the last British Consular report from Mogador. During the Spring the country was ravaged by immense swarms of the insects, which were first reported from the southern province of Soos

about the end of October, were overrunning the neighboring land of Haba and Shiadma by the end of November, and were subsequently heard of in various parts of the interior, and still later from the important grain-producing districts round Mazagan and Casablanca. Late reports from Mazagan were that they were settling down there, and busy laying their eggs, which caused great anxiety for the Spring crops, the young locusts, though unable to fly, being even more unsparing in their devastations than the adult insects. In addition to the damage done to green crops, groves of olive and almond trees were stripped of their bark in several districts, where the next yield of oil and almonds will be seriously affected. In some places farmers had to hurriedly gather their olives before they were ripe to save them from the voracious insects. No general and continued measures are taken, as in Algeria and Australia, against these pests, the only way in which their numbers seem to be materially reduced being the collection of large quantities for sale as food among the natives. They are not "unclean" to either Jew or Mohomedan, though prawns, to which they are compared in flavor by some Europeans who have tasted them, are not eaten. Taken into the town in camel loads in heaping sackfuls of ruddy brown or greenish yellow insects (the first color in Autumn, the latter in Spring); they are first boiled in salt and water, then fried or parched. The same method seems to have been in vogue, according to old writers, early in the last century. When properly preserved the locust was looked upon as a convenient form of food for travelers to take with them on the road. A fearsome story was recently told in the Mellah, or Jew's quarter of Mogador, that two little children, sent to fetch water at a village in Shiadma not returning, their parents went in search of them and found only a heap of bones thickly covered with locusts. It was further reported that a consignment of locusts from that district came in and was sold chiefly in the Mellah, and that many Jews fell ill in consequence of having unwittingly partaken of insects which had eaten human flesh.—*London Times.*

Identification of Insects (Imagos) for Subscribers.

Specimens will be named under the following conditions: 1st, The number of specimens to be unlimited for each sending; 2d, The sender to pay all expenses of transportation and the insects to become the property of the American Entomological Society; 3d, Each specimen must have a number attached so that the identification may be announced accordingly. Address all packages to ENTOMOLOGICAL NEWS, Academy Natural Sciences, Logan Square, Philadelphia, Pa.

Entomological Literature.

COMPTE RENDU. SOCIETE ENTOMOLOGIQUE DE BELGIQUE, June 6, '91.—Descriptions of new species of Clytridæ and Eumolpidæ,* by E. Lefevre; *Colaspis chrevrolati*, St. Domingo, n. sp. Coleoptera of Eastern Africa,* by L. Fairmaire; *Hasumius*, *Selomothus*, *Dichotymus*, *Blosyridius* n. gen. A new genus of Myrmecidæ,* by A. Forel; *Aeromyrma*. Note on the *Chrysochroides*,* by C. Kerremans. Additions and annotations to the lists of indigenous carnivorous Coleoptera and Lamellicorns, by A. P. de Borre.—July 4. Entomological miscellanies. IV. Diagnoses of Madagascan Phytophaga,* by A. Duvivier; *Menioporus*, *Neodera*, *Sanckia*, *Metopœdema*, *Cynortella*, n. gen.

BULLETIN DE LA SOCIETE PHILOMATHIQUE DE PARIS 3e Serie, III, 2, 1891.—On the function of the sting in *Heterodera schachtii;* On the buccal apparatus in the Phyrganids, by J. Chatin. On the resistance to asphyxia by submersion in some insects, by M. Devaux. Note on the structure of the venomous glands of Araneids, by P. Gaubert.

LE NATURALISTE (Paris), Aug. 1, 1891.—Two new *Parnassius* from Central Asia,* by L. Austaut.—Aug. 15. Habits and metamorphoses of *Erastria scitula* Ramb., a nocturnal lepidopter, by Capt. Xambeu.

JAHRESBERICHT DES VEREINS FUR NATURKUNDE ZU ZWICKAU (Saxony), 1890; Zwickau, 1891.—The Gall formations (Zoocecidæ) of the German vascular plants, an introduction to their identification, by Dr. D. H. R. von Schlechtendal.

NOTES FROM THE LEYDEN MUSEUM, xiii, 2, April, 1891.—Descriptions of new species of Curculionidæ,* by W. Roelofs. List of the Lepidopterous insects collected by Mr. A. G. Vorderman in the island of Billiton, by P. C. T. Snellen.

COMPTE RENDU. L'ACADEMIE DES SCIENCES (Paris), July 27, 1891.—Contributions to the natural history of a cochineal, *Rhizœcus falcifer* Kunck., discovered in the green houses of the Museum and living on the roots of the vine in Algeria, by J. K. d'Herculais and F. Saliba.

IL NATURALISTA SICILIANO (Palermo), May, June, July, 1891.—Catalogues of the Coleoptera of Sicily, by E. Ragusa. Entomological note on some species of the genus *Reicheia* and of the genus *Mylabris* (*Bruchus*), by F. Baudi.

ERTESITO AZ ERDELYI MUZEUM-EGYLET ORVOS-TERMESZETTUDOMANYI SZAKOSZTALYABOL (Proceedings of the Medical and Natural Science Section of the Transylvanian Museum Union), xvi, 1, 2, 3, 1891.—*Carabus violaceus* L. var. *Wolfi* Dej. L. v. Mehely. List of the Lepidoptera usually occurring at Klausenberg, by A. Pachinger. Contributions to the Orthopterous fauna of Szilagyer Comitates, by J. Pungur.

* Contains new species other than North American.

ANNALS OF THE QUEENSLAND MUSEUM, No. 1, Brisbane, 1891.—Synonymical catalogue of the Lepidoptera Rhopalocera (butterflies) of Australia, with full bibliographical reference, including descriptions of some new species, by W. H. Miskin.

ZEITSCHRIFT DER DEUTSCHEN GEOLOGISCHEN GESELLSCHAFT, xlii, 4, Berlin, 1891.—Contributions to the knowledge of the fossil Arachnida, by E. Haase; two plates.

BERLINER ENTOMOLOGISCHE ZEITUNG, xxxvi, July, 1891.—Orthopterological contributions, IV: The Pseudophyllidæ of Africa;*† three plates; List of the Acridiodæ collected by Dr. Paul Preuss in Cameroons,* figs.; Sumatran Phaneropteridæ, figs., by F. Karsch. New beetles from East Africa,*† by G. Quedenfeldt. Greek Heteroptera collected by E. von Oertzen and J. Emge,* by O. M. Reuter. Communications on Gallflies from Kreise Siegen,* one plate; Three new gallflies,* by E. H. Rubsaamen. Prussian Amber Beetles, new forms from the Helm collection in the Dantzig Provincial Museum,*† by C. Schaufuss. On the Hymenopterous genera *Evania* and *Gasteruption*,* by E. Taschenberg. On some North African Chilopods,* by C. Verhoeff. A contribution to the Central European Diplopod fauna,* id., four plates. A contribution to the knowledge of the Saldeæ and Leptopods,* id., fig. Some remarks on Apidæ,* id., figs. On the spinning of an *Aphidius* larva upon *Aphis* (*Drepanosiphum*) *platanoides* Schrnk., by Dr. W. Weltner, figs. Obituary notice of Dr. L. W. Schaufuss, with portrait.

RENDICONTO DELL 'ACCADEMIA DELLE SCIENZE FISICHE E MATHEMATICHE (Sezione della Societa Reale di Napoli), 2e Serie, iv, 6, June, 1890.—Miscellanea Entomologica III: Species of Tenthredinidæ from Greece;* A new genus of Italian Tenthredinidæ;* Four species of Hymenoptera from Armenia;* A new species of *Derocalymma*,* by A. Costa.

XV. BERICHT DER NATURFORSCHENDEN GESELLSCHAFT IN BAMBERG. 1890.—The Hemiptera and Cicadina of the vicinity of Bamberg, by Dr. Funk.

OFVERSIGT AF KONGL. VETENSKAPS-AKADEMIENS FORHANDLINGAR. Arg. 48, No. 6, June 10, 1891.—The African genera of Calandridæ allied to *Oxyopisthen* Thomson,*† by C. Aurivillius, figs.

ANNALES DE LA SOCIETE ENTOMOLOGIQUE DE BELGIQUE, xxxiv, Bruxelles, 1890.—Note on the Coleoptera brought from the Congo by MM. le Capt. Bia, Leon Cloetens, Fern. de Meuse, Joseph Duvivier and Lieut. Paul Lemarinel. List of the species and new descriptions,*† by A. Duvivier. Catalogue of the Ichneumonidæ of Belgium belonging to the group Tryphonidæ,* by Dr. Jacobs and Dr. Tosquinet. Essay on the Malacoderms of Belgium, by E. Rousseau.

* Contains new species other than North American. † Contains new genera.

DEUTSCHE ENTOMOLOGISCHE ZEITSCHRIFT (Iris, Dresden, iv, 1), Jahrgang, 1891, Lepidopterological No. 1, Berlin, 1891.—On the systematic classification of the butterflies, by Dr. E. Haase. List of the Lepidoptera collected in Palestine and Syria by Dr. Alphons Stubel, including three new species,* by H. Calberla. On a collection of Lepidoptera from Bangala, by Emily Mary Sharpe. New exotic Lepidoptera,* by Dr. O. Staudinger, two plates. A new *Parnassius*-form and two new Palaearctic species of *Arctia*,* id. The Macrolepidoptera of the neighborhood of Dresden, by H. Steinert.

ENTOMOLOGISCHE NACHRICHTEN, xvii, 15, August, 1891.—Cryptid studies, by Dr. Kriechbaumer. On *Chiastocheta* (*Aricia*) *trolli* Zett., V. von Roder. The Zoöcecidæ of Lorraine (continued), by J. J. Kieffer.—No. 16. August, 1891. A new *Ornithoptera*,* by E. G. Honrath. Sumatran Odonata collected by Dr. L. Martin in Bindjei (Deli),* by Dr. F. Karsch. Tryphonid studies,* by Dr. Kriechbaumer. The Zoocecidæ of Lorraine (concluded), by J. J. Kieffer.

MITTHEILUNGEN DER SCHWEIZERISCHEN ENTOMOLOGISCHEN GESELLSCHAFT. viii, 6, 7, Schaffhausen, 1890.—Lepidopterological gleanings,* by P. Ratzer. Norwegian ants and glandular cement as material for the nest building of ants, by Dr. A. Forel. A new Orthosia from southern France,* by Dr. M. Standfuss. A new *Ichneumon* from Switzerland,* by Dr. Kreichbaumer. *Ephippigera crucigera* Fieb., by Dr. G. Schoch. On some varieties of *Carabus auronitens*, by Dr. G. Stierlin. Remarks on Coleoptera and description of new species,* id. On the habits of the Wustengrill (*Brachytrypus megacephalus* Serv.), by Dr. A. Forel. Collecting note (a new species of Coleoptera) and Coleoptera Helvetiæ (continued), by Dr. G. Stierlin. New Hymenoptera from Madagascar,* by H. de Saussure. Description of some new snout beetles,* by Dr. G. Stierlin.

VERHANDLUNGEN D. K. K. ZOOLOGISCH-BOTANISCHEN GESELLSCHAFT IN WIEN, xli, 2.—Contribution to the Microlepidopterous fauna of Dalmatia,* by Dr. H. Rebel. Diagnoses of new butterflies in the k. k. Natural History Court Museum,* by A. F. Rogenhofer.

ANNALES DES SCIENCES NATURELLES. ZOOLOGIE 7e Serie, xi, 6, July 20, 1891.—On some points in the history of the embryonal development of the praying Mantis (*Mantis religiosa*), by H. Viallanes; two plates.

MELANGES BIOLOGIQUES TIRES DU BULLETIN DE L'ACADEMIE IMPERIALE DES SCIENCES DE ST. PETERSBOURG, xiii, 1, 1891.—Entomological contributions: I. Two new Central Asian species of *Carabus*. II. On the synonymy of some Carabids, by A. Morawitz. List of the species of the genus *Scolytus* in the collection of the Musee de l'Academie Imperiale des Sciences of St. Petersbourg,* by I. Schevyrew.

BULLETIN DE LA SOCIETE IMPERIALE DES NATURALISTES DE MOSCOW, 1890, No. 4; 1891.—*Tarantula opiphex mihi*,* by W. A. Wagner; 1 plate.

* Contains new species other than North American.

TRAVAUX DE LA SOCIETE DES NATURALISTES A. L'UNIVERSITE IMPERIALE DE KHARKOW, xxiv, 1891.—List of the Evaniidæ found in the government of Kharkow, by W. A. Jarochewsky.

WEST AMERICAN SCIENTIST, vol. vii, No. 61.—New Bombylidæ from California, by D. W. Coquillett. *Lordotus junceus* n. sp., *L. diversus* n. sp., *Toxophora vasta* n. sp.

TRANSACTIONS AND PROCEEDINGS OF THE NEW ZEALAND INSTITUTE, vol. xxiii, 1890.—Further Coccid notes, with descriptions of new species from New Zealand, Australia and Fiji, by W. M. Maskell. The habits and life-history of the New Zealand Glowworm, by G. V. Hudson. On New Zealand Cicadæ, by G. V. Hudson. A few words on the Codlin-moths *Carpocapsa pomonella* and *Cacœcia excessana*, by G. V. Hudson. New species of Lepidoptera, by E. Meyrick. On new species of Araneæ, by A. T. Urquhart. On the occurrence of *Danais archippus* and *Sphinx convolvuli* (?) in Nelson, by R. I. Kingsley.

THE JOURNAL OF THE LINNEAN SOCIETY, vol. xxiii, No. 146.—On the tongues of the British Hymenoptera Anthophila, by Edward Saunders. Vol. xx, Nos. 124-25.—Notes on the zoölogy of Fernando Noronha, by H. N. Ridley. Insects, excepting Coleoptera, by W. F. Kirby. Coleoptera, by C. O. Waterhouse.

ENTOMOLOGIST'S MONTHLY MAGAZINE, September 9.—Entomological notes from Port Darwin, by J. J. Walker. Larva of *Eupoecilia geyeriana*, by N. M. Richardson. New genera of Agdistidæ and Pterophoridæ, by Lord Walsingham. Notes on British and exotic Coccidæ, by J. W. Douglas. Above paper describes two new species, *Orthezia occidentalis* from Colorado, and *Orthezia prælonga* from Trinidad. On two species of *Elcatis* found in Japan, by S. Lewis. Notes on food-plants of *Thecla rubi*, by R. M. Prideux. *Stenophylax alpestris* in Yorkshire, by G. T. Porritt. *Nothochrysa capitata* near Weymouth, by N. M. Richardson. *Dufourea vulgaris* at Cobham Surrey, by E. Saunders. Various captures in June and July, by C. W. Dale. On oviposition and ovipositor in certain Lepidoptera, by John H. Wood.

THE ENTOMOLOGIST, vol. xxiv, No. 338.—*Cucullia verbasci* and its allies (with plate), by Richard South. A preliminary list of the insect fauna of Middlesex, by T. D. A. Cockerell. Entomology of Granada and its neighborhood, by F. A. Walker. Contributions to the chemistry of insect colors, by F. H. P. Coste. Notes, news, captures, etc. Doings of societies.

OBITUARY.—The death is announced of Mr. Ferdinand Grut, F.L.S., who was at one time vice-president of the Entomological Society of London, and also occupied other important positions in the Society at various times.

Doings of Societies.

THE ENTOMOLOGICAL SOCIETY OF WASHINGTON.—February 5, 1891. Mr. Schwarz presented for publication descriptions of two North American species of the Cuculionid genus *Phytobius*, and one of them he considered to be identical with the European *P. velatus*. The other is described under the name of *Ph. griseomicans*. Mr. Schwarz also spoke of the difficulty in recognizing, from the descriptions, the North American species of *Pityophthorus* and pointed out that only secondary sexual characters seemed to offer a satisfactory criterion for the separation of many closely allied species. The *Pityophthorus* so common under bark of Liquid Amber is not *P. annectens* as formerly assumed by him, but is identical with the species occurring under bark of Sumach, and which is named in collections *P. consimilis*. Discussed by Messrs. Riley and Schwarz.

Prof. Riley introduced the question of what, strictly speaking, is a cocoon, and said that he was strongly of the opinion that this term should not be applied to cells formed by the hollowing out of plant substances, such as the end, stalk or crown of plants, or to cells made in the earth. The word "cocoon," he stated, should signify a structure composed more or less of silk or gluten. The others could be more strictly termed pupal cells or cradles.

C. L. MARLATT,
Recording Secretary.

OBITUARY

EDWARD BURGESS.—"Edward Burgess, the well-known entomologist and yacht designer, died at Boston the early part of July, 1891. He was forty-three years old at the time of his death. After graduating at Harvard in 1871, he was instructor in entomology for some time, and became well known as a student of the Diptera. He published a number of descriptive papers, and brought together a large collection. He also became interested in insect anatomy, and published several admirable papers upon this subject. His anatomy of the milk-weed butterfly, published in the Memoirs of the Boston Society of Natural History is a most admirable paper, and a positive contribution to knowledge."

ENTOMOLOGICAL NEWS for September was mailed September 2, 1891.